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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION**

HUAWEI TECHNOLOGIES CO., LTD.,
HUAWEI DEVICE USA, INC., and
HUAWEI TECHNOLOGIES USA, INC.,

Plaintiffs / Counterclaim-Defendants,

v.

SAMSUNG ELECTRONICS CO., LTD.,
SAMSUNG ELECTRONICS AMERICA,
INC.,

Defendants / Counterclaim-Plaintiffs,

and

SAMSUNG RESEARCH AMERICA,

Defendant,

v.

HISILICON TECHNOLOGIES CO., LTD.,

Counterclaim-Defendant.

Case No. 16-cv-02787-WHO

**HUAWEI'S MOTION FOR SUMMARY
JUDGMENT WITH RESPECT TO:**

- 1. SAMSUNG'S ANTITRUST CLAIM**
- 2. NON-INFRINGEMENT OF
SAMSUNG'S '350 PATENT CLAIM**
- 3. NON-INFRINGEMENT OF
SAMSUNG'S '130 PATENT CLAIMS**
- 4. NON-INFRINGEMENT OF
SAMSUNG'S RE105 PATENT
CLAIMS**
- 5. NON-INFRINGEMENT OF
SAMSUNG'S '825 PATENT CLAIMS**

Hearing Date: August 8, 2018

Time: 2:00 PM

Judge: Hon. William H. Orrick

**UNREDACTED VERSION OF
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Plaintiffs Huawei Technologies Co., Ltd., Huawei Device USA, Inc. and Huawei Technologies USA, Inc. (collectively, “Huawei”) hereby move for summary judgment with respect to: (1) Count X of Samsung’s Amended Counterclaims alleging monopolization in violation of Section 2 of the Sherman Act; (2) non-infringement of claim 1 of Samsung’s U.S. Patent No. 8,509,350 (“’350 Patent”); (3) non-infringement of claims 1 and 4 of Samsung’s U.S. Patent No. 9,288,825 (“’825 Patent”); (4) non-infringement of claims 12, 13, and 16 of Samsung’s U.S. Patent No. 8,761,130 (“’130 Patent”); and (5) non-infringement of claims 28, 29, and 32 of Samsung’s U.S. Patent No. RE44,105 (“’105 Patent”).

I. THE LEGAL STANDARD.

Summary judgment on a claim or defense is appropriate “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). To prevail, the moving party must show the absence of a genuine issue of material fact with respect to an essential element of the non-moving party’s claim, or to a defense on which the non-moving party will bear the burden of persuasion at trial. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 324 (1986). Once the movant has made this showing, the burden then shifts to the party opposing summary judgment to identify “specific facts showing that there is a genuine issue for trial.” *Id.* The opposing party must then present affirmative evidence from which a jury could return a verdict in that party’s favor. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 257 (1986). “[A] determination of infringement, both literal and under the doctrine of equivalents, is a question of fact.” *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1318 (Fed. Cir. 2003); *see also Kilopass Tech. Inc. v. Sidense Corp.*, No. 10–cv–02066–SI, 2012 WL 3545286, at *4 (N.D. Cal. Aug. 16, 2012). Because the ultimate burden of proving infringement rests with the patentee, an accused infringer may show that summary judgment of non-infringement is proper either by producing evidence that would preclude a finding of infringement, or by showing that the evidence on file fails to create a material factual dispute as to any essential element of the patentee’s case. *See Novartis Corp. v. Ben Venue Labs., Inc.*, 271 F.3d 1043, 1046 (Fed. Cir. 2001).

II. HUAWEI IS ENTITLED TO SUMMARY JUDGMENT ON SAMSUNG'S ANTITRUST CLAIM.

Huawei is entitled to summary judgment on Samsung's Count X, which is at best a breach of contract claim masquerading as an antitrust claim. In its Amended Counterclaims (ECF No. 90-2), Samsung alleged that Huawei had monopolized certain "Relevant Technology Markets" — consisting of the technologies covered by the Huawei patents asserted against Samsung in the U.S. and China that have been incorporated into the 3G and 4G mobile standards (*id.* at ¶ 405)—by having its patents incorporated in the standards on the basis of false promises to license those patents on fair, reasonable, and non-discriminatory ("FRAND") terms and later allegedly reneging on those promises by demanding excessive royalties and seeking injunctions against Samsung in China. *Id.* at ¶¶ 415-427.

In support of its antitrust claim, Samsung has offered the expert opinions of Dr. Jerry Hausman. Dr. Hausman did not analyze the claim pled in Samsung's Amended Counterclaims. He did not analyze the manner in which Huawei allegedly obtained the monopoly power he claims Huawei has in the slightly narrower set of technology markets on which he focuses. Instead, he focused exclusively on the effect of Huawei's pursuit of injunctions, concluding that "[i]n seeking an injunction Huawei exploits that market power [that Huawei obtained by having its patented technology incorporated in the standards] and attempts to monopolize those technology markets." Ex. ¹ 1, Hausman Rpt. ¶ 9. He claims that Huawei's injunction actions create a "dangerous probability of success" that Huawei will be able to exercise its monopoly power, which "arises from the probability that the court will grant the requested injunction." *Id.* ¶ 58 & n.50. And he concludes that "by seeking an injunction Huawei is seeking to exploit its market power and obtain higher royalties. These higher royalties are equivalent to higher prices than would have occurred in the absence of the injunction and are thus a violation of Section 2." *Id.* at ¶ 56.

Whichever version of Samsung's antitrust claim one considers, Huawei is entitled to summary judgment. "It is settled law that the mere existence of a monopoly does not violate the

¹ Unless otherwise indicated, all exhibits referenced herein are attached to the declaration of John W. McBride in Support of Huawei's Motion for Summary Judgment ("McBride MSJ Decl."), filed concurrently with the instant motion.

Sherman Act.” *Rambus, Inc. v. Federal Trade Comm’n*, 522 F.3d 456, 463 (D.C. Cir. 2008) (citing *Verizon Commc’ns, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004)). Nor is it unlawful under the Sherman Act for a monopolist to charge monopoly prices. *Verizon Commc’ns*, 540 U.S. at 407. To establish a Section 2 violation, a plaintiff must show that the defendant acquired or maintained—or, with specific intent, created a dangerous probability of acquiring—a monopoly position through exclusionary or anticompetitive conduct causing antitrust injury. *Verizon Commc’ns*, 540 U.S. at 407; *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993); *Rheumatology Diagnostics Lab, Inc. v. Aetna, Inc.*, No. 12-cv-05847-WHO, 2013 WL 5694452, at *14-15 (N.D. Cal. Oct. 18, 2013). For the reasons set forth below, the undisputed facts show that Samsung cannot establish either that Huawei has engaged in the requisite exclusionary conduct or that Huawei’s conduct has or will, as required, harm competition (as opposed to merely Samsung itself). Furthermore, Samsung’s antitrust claim—which is premised on the idea that Huawei’s successful effort to obtain injunctive relief from Chinese courts for infringement of Huawei’s Chinese patents can violate the U.S. antitrust laws—is barred by the “act of state doctrine” which prohibits U.S. courts from passing on the legitimacy of the acts of a foreign sovereign. Accordingly, Huawei is entitled to judgment as a matter of law on Samsung’s antitrust claim.

A. Background And Undisputed Facts².

For purposes of Samsung’s antitrust claim, its expert Dr. Hausman has defined six relevant “technology markets” consisting of six Chinese standard essential patents that Huawei has asserted against Samsung in China, the U.S. patent or patent application counterparts to those patents, and the alternative technologies that could be used in the LTE standard to implement the same functionalities. Ex. 1, Hausman Rpt. ¶¶ 41-54. “Because Huawei’s technology was chosen for the standard in each of the technology markets, thereby eliminating the ex ante alternatives,” Dr. Hausman opines that “Huawei is a monopolist with market power in each of the technology markets.”³ *Id.* ¶¶ 55-56. Huawei timely disclosed the patents that constitute the alleged relevant

² Additional undisputed facts relevant to Huawei’s motion for summary judgment with respect to Samsung’s antitrust claim are set forth in the following sections.

³ Huawei accepts solely for purposes of the present motion that the relevant technology markets identified by Dr. Hausman are properly defined and that it possesses monopoly power in them.

1 technology markets and committed, in accordance with the ETSI IPR Policy, to be prepared to grant
 2 licenses to those patents on fair, reasonable, and non-discriminatory (“FRAND”) terms and
 3 conditions subject to reciprocity. Ex. 2, Chang Dep. (May 31, 2018) 22:12-19, 34:14-35:18; Exs. 3 -
 4 6 (Chang Exhibits 734-737); Ex. 7, Hausman Dep. (June 19, 2018) 201:15-25, 203:12-17.

5 Dr. Hausman confirmed his antitrust theory was based solely on his belief that Huawei had
 6 violated its FRAND commitment by seeking injunctions against Samsung in China. Ex. 7, Hausman
 7 Dep. 212:16-213:2; see Ex. 1, Hausman Rpt. ¶ 60. According to Dr. Hausman, “Huawei’s
 8 injunction-seeking conduct in China will have a direct, substantial, and reasonably foreseeable
 9 economic impact on domestic commerce in the United States.” *Id.* ¶ 59. But Dr. Hausman
 10 conceded that no such harm to consumers has yet taken place. Ex. 7, Hausman Dep. 214:6-215:2.

11 B. The Governing Law.

12 Section 2 of the Sherman Act makes it illegal for any person to “monopolize, or attempt to
 13 monopolize . . . trade or commerce.” 15 U.S.C. § 2. To prevail on a monopolization claim,
 14 Samsung must prove that Huawei (1) possesses monopoly power in the relevant market, (2)
 15 acquired, enhanced, or maintained that power through exclusionary conduct, and (3) caused antitrust
 16 injury by its conduct. *Verizon Commc’ns*, 540 U.S. at 407. “[T]o be condemned as exclusionary, a
 17 monopolist’s act must have ‘anticompetitive effect.’ That is, it must harm the competitive process
 18 and thereby harm consumers. In contrast, harm to one or more competitors will not suffice.”
 19 *Rambus Inc. v. FTC*, 522 F.3d 456, 463 (D.C. Cir. 2008) (quoting *United States v. Microsoft Corp.*,
 20 253 F.3d 34, 58 (D.C. Cir. 2001) (en banc)). To prevail on an attempted monopolization claim,
 21 Samsung must show that Huawei (1) engaged in predatory or anticompetitive conduct (2) with a
 22 specific intent to monopolize and (3) a dangerous probability of achieving monopoly power.
 23 *Spectrum*, 506 U.S. at 456. The requirements for monopolization and attempted monopolization are
 24 similar, “differing primarily in the requisite intent and the necessary level of monopoly power.”
 25 *Image Tech. Servs., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1202 (9th Cir. 1997).

26 C. Samsung Cannot Establish Actionable Exclusionary Conduct.

27 1. Huawei’s alleged breaches of its ETSI FRAND commitments are not, in 28 and of themselves, exclusionary conduct.

As a threshold matter, it is not enough to establish an antitrust violation for Samsung to show that Huawei breached its FRAND obligations, engaged in alleged patent “hold-up,” or, to use Dr. Hausman’s language, used injunction actions “to exploit its market power and obtain higher royalties.” Ex. 1, Hausman Rpt. ¶ 56. It is axiomatic that “the mere possession of monopoly power and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system.” *Verizon Commc’ns*, 540 U.S. at 879. The D.C. Circuit’s decision in *Rambus*, makes this clear. In that case, the FTC had found in that Rambus had violated Section 2 by failing to disclose patents essential to standards set by the JEDEC standard-setting organization. In evaluating Rambus’s appeal, the D.C. Circuit noted that the FTC’s findings left open two possibilities regarding what would have happened if Rambus had made the disclosures the FTC believed were required. On one hand, it was possible that, had the disclosures been made, JEDEC would have adopted a different standard not including Rambus’s technology. Alternatively, JEDEC could have required Rambus to commit to license its patents on RAND terms. *Rambus*, 522 F.3d at 462. In analyzing whether antitrust liability could be imposed on the basis of the second possibility—that Rambus used deception to avoid making and adhering to RAND commitments—the D.C. Circuit held that “an otherwise lawful monopolist’s end-run around price constraints, even when deceptive or fraudulent, does not alone present a harm to competition in the monopolized market.” *Id.* at 466 (citing *NYNEX Corp. v. Discon, Inc.*, 525 U.S. 128 (1998)). *See also Vizio, Inc. v. Funai Elec. Co., Ltd.*, No. CV 09-0174 AHM (RCx), 2010 WL 7762624, at *5-6 (C.D. Cal. Feb. 3, 2010) (dismissing Section 2 claim predicated on the alleged repudiation of the FRAND commitments by a subsequent purchaser of the patents). To hold otherwise would convert every breach of a FRAND commitment into a violation of the antitrust laws, inappropriately imposing the risk of treble damages for a mere breach.

So too here; even assuming (contrary to the facts) that Huawei’s pursuit of injunctions in China will permit Huawei to charge non-FRAND royalties for a license to its patents, that would not be actionable “exclusionary” conduct because it will have no effect on the structure of the alleged relevant technology markets. As Dr. Hausman acknowledges (Ex. 1, Hausman Rpt. ¶ 55), Huawei’s alleged position as a monopolist in the relevant technology markets is a function of the fact that

ETSI chose Huawei's patents for incorporation in the standard; its position in the relevant technology markets for licensing its SEPs will not be strengthened in any way if it charges Samsung excessive royalties. To the contrary, if Huawei were to charge excessive prices, that would tend to induce competition, not exclude it. *Rambus*, 522 F.3d at 466 ("[H]ad JEDEC limited Rambus to reasonable royalties and required it to provide licenses on a nondiscriminatory basis, we would expect *less* competition from alternative technologies, not more; high prices and constrained output tend to attract competitors, not to repel them."). Simply put, the mere exploitation of monopoly power is not a violation of Sherman Act.

2. There is no evidence that Huawei acquired monopoly power in the relevant technology markets through exclusionary conduct.

To have a potentially viable antitrust claim, Samsung needs to establish not that Huawei's injunction actions will permit it to obtain excessive royalties, but rather that Huawei engaged in exclusionary conduct that allowed it to acquire or maintain—or created a dangerous probability that it would acquire—a monopoly position in the relevant technology markets. Although not binding precedent, the Third Circuit considered such a claim in *Broadcom Corp. v. Qualcomm, Inc.*, 501 F.3d 297 (3d Cir. 2007), and held that:

(1) in a consensus-oriented private standard-setting environment, (2) a patent holder's intentionally false promise to license essential proprietary technology on FRAND terms, (3) coupled with an SDO's reliance on that promise when including the technology in a standard, and (4) the patent holder's subsequent breach of that promise, is actionable anticompetitive conduct.

Id. at 314.⁴ A *Broadcom* claim "sounds in fraud." *Apple Inc. v. Samsung Elecs. Co., Ltd.*, No 11-cv-1846-LHK, 2011 WL 4948567, at *4 n.5 (N.D. Cal. Oct. 18, 2011). The critical feature of such a claim is that the patent holder made its FRAND commitments, on which the SSO relied in incorporating its patents in the standard, with the intention of violating those commitments. *See Goda Kaisha IP Bridge 1 v. TCL Commc'n Tech. Holdings Ltd.*, No. 15-634-SLR-SRF, 2017 WL

⁴ In *Broadcom*, the Third Circuit reversed the district court's dismissal of the plaintiff's antitrust claim at the pleading stage. The court rested much of its analysis on what it termed the FTC's "landmark" decision in *In the Matter of Rambus, Inc.*, which was subsequently reversed by the D.C. Circuit in *Rambus*. *Id.* To Huawei's knowledge, no plaintiff has ever prevailed at trial on the kind of antitrust claim set forth in *Broadcom*.

750700, at *7 (D. Del. Feb. 27, 2017) (recognizing that “relevant court cases involve a patent holder who enters into an agreement with an SSO with the intention of violating its FRAND commitment” and declining to extend *Broadcom* where the intent was not present when the standard was set).⁵

Here, Samsung has no evidence that Huawei intended to breach its obligations to license its patents on FRAND terms when it made those commitments. To the contrary, the undisputed facts undermine any such claim. Dr. Hausman, acknowledges that he has not personally analyzed how Huawei’s patents were incorporated into the LTE standard but rather has based his analysis of Samsung’s antitrust claim on Huawei’s alleged exploitation of its alleged monopoly power. Ex. 7, Hausman Dep. 201:15-22, 212:16-213:2.⁶ Samsung did not depose any of the Huawei employees that submitted the declarations to ETSI committing to be prepared to grant licenses to the relevant patents on FRAND terms. The only basis that Samsung’s 30(b)(6) designee had for suggesting that Huawei’s FRAND commitments were false was the manner in which Huawei allegedly negotiated with Samsung itself. Ex. 2, Chang Dep. (May 31, 2018) 22:12-19, 34:14-35:18, 47:19-48:6. While Samsung claims that Huawei’s conduct in its negotiations with Samsung has breached Huawei’s FRAND obligations, that fact, even if true (which it is not), does not demonstrate that Huawei lied in the standard-setting process. Indeed, evidence of the subsequent breach of a contractual commitment is insufficient as a matter of law to prove the contractual promise was fraudulent when it was made.⁷ *United States ex. rel. O’Donnell v. Countrywide Home Loans, Inc.*, 822 F.3d 650, 658 (2d Cir. 2016) (applying federal common law and holding that “where allegedly fraudulent misrepresentations are promises made in a contract, a party claiming fraud must prove fraudulent intent at the time of contract execution; evidence of a subsequent, willful breach cannot sustain the

⁵ The magistrate judge’s report and recommendation in *Goda Kaisha IP Bridge 1* was adopted by the district court. *Id.*, 2017 WL 1055958 (D. Del. Mar. 20, 2017).

⁶ The technical experts on which Dr. Hausman relies simply identify alleged alternatives to Huawei’s technology that supposedly existed at the time the standards in question were set; they do not address the veracity of Huawei’s declarations to ETSI committing to be prepared to grant licenses on FRAND terms.

⁷ The Sherman Act is interpreted with reference to common-law principles. *Nat’l Soc’y of Prof’l Engineers v. United States*, 435 US 679, 688 (1978) (“Congress, however, did not intend the text of the Sherman Act to delineate the full meaning of the statute or its application in concrete situations. The legislative history makes it perfectly clear that it expected the courts to give shape to the statute’s broad mandate by drawing on common-law tradition.”).

claim.”); *Corley v. Rosewood Care Ctr., Inc. of Peoria*, 388 F.3d 990, 1007 (7th Cir. 2004) (“Fraud requires much more than simply not following through on contractual or other promises. It requires a showing of deception at the time the promise is made.”); *Simpson v. Allstate Ins.*, No. C-99-02940-CRB, 2000 WL 1006533, at *3 (N.D. Cal. July 10, 2000) (“[S]omething more than nonperformance is required to prove the defendant’s intent not to perform his promise [I]f plaintiff adduces no further evidence of fraudulent intent than proof of nonperformance of an oral promise, he will never reach of jury.”) (applying California law; quoting *Tenzer v. Superscope, Inc.*, 39 Cal. 3d 18, 30, 216 Cal. Rptr. 130, 702 P.2d 212 (1985)).

Additional undisputed facts further undermine any inference that Huawei intended to violate its FRAND obligations when it committed to be prepared license its SEPs on FRAND terms to ETSI. For one thing, the fact that Huawei has a long history of successfully entering into license agreements covering Huawei’s SEPs with other participants in the industry, including (among others) Qualcomm, Nokia, Ericsson, NTT DoCoMo, and Apple, undermines any reasonable inference that Huawei declared its patents with the intent not to abide by its FRAND obligations. Moreover, in cases where Huawei has been unable to reach an agreement involving licensing SEPs, it has sought neutral third-party determinations of the FRAND terms of a license. Ex. 8, Cheng Dep. (Mar. 21, 2018) 16:21-17:1, 18:5-20 (describing arbitration of FRAND terms with InterDigital), 29:8-30:22 (describing arbitration of FRAND terms with Ericsson).) Indeed, Huawei has offered to resolve its licensing dispute with Samsung via arbitration or court determination, but Samsung has not expressed any interest in doing so. Ex. 9, Jang Dep. (Mar. 6, 2018) 217:10-17, 219:3-229:4; Ex. 10, Chang Dep. (Mar. 2, 2018) 104:10-106:4, 241:2-242:16; Ex. 11, Chang Dep. Exhibit 655; Ex. 12, Jang Dep. Exhibit 667; Ex. 13, Jang Dep. Exhibit 670; Exs. 14-17, Jang Dep. Exhibit 680-683. If Huawei had intended not to abide by its FRAND commitments when it made them, it would not have successfully entered into countless SEP licensing agreements, nor would it have submitted its FRAND licensing disputes to resolution by neutral third-parties including this Court. If it were sufficient to point to a single subsequent licensing dispute (like what has emerged between Samsung and Huawei) to create a triable issue that Huawei’s commitments were intentionally false when they were made, every contract dispute involving FRAND commitments would give rise to potential

1 antitrust liability.⁸ That is not the law.

2 **D. Samsung Cannot Show Actionable Harm to Competition.**

3 “The antitrust laws ‘were enacted for the protection of *competition*, not *competitors*.’”
 4 *Gorlick Distrib. Ctrs., LLC v. Car Sound Exhaust Sys., Inc.*, 723 F.3d 1019, 1024 (9th Cir. 2013)
 5 (quoting *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488 (1977) (emphasis in
 6 original). As a result, an antitrust plaintiff must “demonstrate injury to competition in the market as
 7 a whole, not merely injury to itself as a competitor.” *Id.* at 1024-25 (citing *Brantley v. NBC*
 8 *Universal, Inc.*, 675 F.3d 1192, 1200 (9th Cir.2012); *McDaniel v. Appraisal Inst.*, 117 F.3d 421, 423
 9 (9th Cir.1997); *Zoslaw v. MCA Distrib. Corp.*, 693 F.2d 870, 887 (9th Cir.1982). The undisputed
 10 facts demonstrate that Samsung cannot meet this requirement.

11 Samsung’s antitrust counterclaim points to two different actions by Huawei that allegedly
 12 have injured Samsung: (1) demanding supra-competitive royalties for a license; and (2) seeking
 13 injunctive relief in China. *See* ECF No. 90-2 ¶¶ 337, 427, 523. The only harm disclosed by Dr.
 14 Hausman is Samsung’s litigation costs, which Dr. Hausman conceded were “harms to Samsung,” not
 15 “harms to consumers.” Ex. 1, Hausman Rpt. ¶ 60; Ex. 7, Hausman Dep. 214:6-9.

16 With respect to Huawei’s license proposals, [REDACTED].
 17 Ex. 7, Hausman Dep. at 16:9-15. Huawei’s proposed royalties, therefore, cannot have caused any
 18 antitrust injury to Samsung or to consumers. *Apple Inc. v. Motorola Mobility, Inc.*, 886 F. Supp. 2d
 19 1061, 1076 (W.D. Wis. 2012) (no evidence that Apple “suffered any injury as a result of Motorola’s
 20 terminating its license” where “Apple refused to pay” the royalties sought by Motorola). Neither
 21 Samsung nor Dr. Hausman allege that any of Huawei’s claims in this action—much less all of
 22 them—are shams under any standard; accordingly, the defense costs it has borne (or will bear) in

23 ⁸ Huawei’s pursuit of injunctive relief against Samsung does not distinguish this case or suggest that
 24 Huawei’s FRAND commitments were false when made. Samsung has itself sought injunctive
 25 relief on its SEPs and has taken the position that doing so is consistent with the ETSI IPR Policy and
 26 was commonplace in the period that Huawei made its FRAND declarations. Ex. 18, (Samsung
 27 Public Interest Statement in ITC Inv. No. 337-TA-794 at 10 (“[N]othing in any ETSI rule or policy
 28 precludes or could preclude injunctions.”); Ex. 19, Stasik Expert Report ¶¶ 49-53. It is also
 undisputed that Huawei has offered to withdraw its requests for injunctive relief if Samsung would
 agree to a binding process (in court or arbitration) of the FRAND terms of a cross-license. Ex. 20,
 Sept. 6, 2016 Letter from Cheng to Chang. The fact that Huawei is willing to withdraw its
 injunction requests and commit resolution of the dispute to a neutral third party again undermines
 any reasonable inference that it has a long-held plan to evade its FRAND obligations.

1 this litigation do not constitute cognizable antitrust harm. *Id.* at 1076 (rejecting antitrust claim
 2 because Apple “identifie[d] no other damages except litigation fees and expenses” and its antitrust
 3 claim was “premised on Motorola’s attempt to enforce its patents,” which was privileged conduct
 4 protected by the First Amendment and the *Noerr-Pennington* doctrine). Huawei’s royalty demands
 5 thus cannot support any antitrust injury.

6 With respect to injunctive relief in China, Dr. Hausman agreed that “harms to consumers”
 7 have not yet occurred, and that an antitrust injury had not yet arisen. Ex. 7, Hausman Dep. 214:6-
 8 215:2 (“So in terms of injury to U.S. consumers, it hasn’t happened yet.”). While Dr. Hausman
 9 speculates that “if the injunction takes effect, there will be massive harm to consumers,” Ex. 7,
 10 Hausman Dep. 214:18-20, he ignores Huawei’s consistent, standing offer to forego injunctive relief
 11 if Samsung will agree to a neutral, third-party FRAND determination. Dr. Hausman conceded that if
 12 Samsung agreed to such a FRAND determination, there would be no impact on domestic commerce
 13 in the United States. *Id.* at 210:7-17.

14 **E. Samsung’s Antitrust Claim Is Barred by the Act of State Doctrine.**

15 Leaving aside that Samsung could avoid any impact of an injunction simply by agreeing to a
 16 neutral determination of the FRAND terms of a cross-license, the only way that Huawei’s pursuit of
 17 injunctive remedies in China could possibly affect competition would be if Huawei successfully
 18 obtained such relief from the Chinese courts. But a decision by the Chinese courts to grant Huawei
 19 injunctive relief cannot form the basis of liability under U.S. antitrust law because the “act of state
 20 doctrine” bars a U.S. court from passing on the legitimacy of the decision of a Chinese court as to
 21 whether such an injunction was in the public interest in China.

22 The act of state doctrine is a long-standing common-law principle that derives from
 23 considerations of international comity and precludes a U.S. court from evaluating the validity of
 24 actions of a foreign state. *See W.S. Kirkpatrick & Co. v. Env’t Tectonics Corp.*, 493 U.S. 400, 406
 25 (1990); *In re Philippine Nat’l Bank*, 397 F.3d 768, 772 (9th Cir. 2005) (Philippine Supreme Court
 26 decision upholding forfeiture order was an “act of state”). As the Supreme Court stated:

27 Every sovereign state is bound to respect the independence of every
 28 other sovereign state, and the courts of one country will not sit in
 judgment on the acts of the government of another done within its own

territory. Redress of grievances by reason of such acts must be obtained through the means open to be availed by sovereign powers as between themselves.

Underhill v. Hernandez, 168 U.S. 250, 252 (1897). An action will be barred under the act of state doctrine “if: (1) there is an ‘official act of a foreign sovereign performed within its own territory’; and (2) ‘the relief sought or the defense interposed [in the action would require] a court in the United States to declare invalid the [foreign sovereign’s] official act.’” *Credit Suisse v. U.S. Dist. Court for the Cent. Dist. of California*, 130 F.3d 1342, 1346 (9th Cir. 1997) (quoting *Kirkpatrick & Co. v. Env’t Tectonics Corp., Int’l*, 493 U.S. 400, 405 (1990)). A foreign court judgment arising out of private litigation may be considered an act of state when it gives effect to the public interest of the foreign government. *See In re Phillipine Nat’l Bank*, 397 F.3d at 773; *Liu v. Republic of China*, 892 F.2d 1419, 1433-34 & n.2 (9th Cir. 1989); Restatement (Second) of Foreign Relations of the United States § 41 cmt d. (“A judgment of a court may be an act of state.”).

Dr. Hausman’s antitrust theory focuses exclusively on Huawei’s injunctive suits in China. *See* Ex. 1, Hausman Rpt. ¶¶ 56-60; Ex. 7, Hausman Dep. 212:16-213:2; *see also* ECF No. 90-2 ¶¶ 500-507, 530-36. The Shenzhen court decisions granting those injunctions are official acts of a foreign sovereign performed with its territory. Samsung’s antitrust counterclaim seeks to bar Huawei from enforcing those injunctions on the theory that Huawei violated U.S. antitrust law by filing its suits in China. To evaluate that claim, this Court must evaluate whether Huawei’s acts of obtaining injunctions in China are a valid enforcement of Huawei’s Chinese patent rights, or whether they unlawfully enhanced or maintained Huawei’s monopoly power under the U.S. antitrust laws. To grant the relief Samsung seeks—permanently barring Huawei from enforcing the injunctions duly granted by the Chinese courts—this Court will be required to nullify the outcome of the Shenzhen Court proceedings and declare the injunctions invalid and violative of U.S. antitrust law.

Although the Shenzhen Court’s decision reflects the outcome of a private litigation, the act of state doctrine nonetheless bars Samsung’s antitrust claim because the Shenzhen decision gives effect to China’s public interest in the enforcement of the FRAND obligation. Huawei obtained injunctive relief only after the Shenzhen Court analyzed the FRAND obligation in detail, including the public interest basis for enforcing those obligations. The Court began with the proposition that “Standard

essential patent licensing in our country [China] shall also follow FRAND (Fair, Reasonable and Non-Discriminatory) principles.” Ex. 21, Shenzhen Decision at 30. The Court’s FRAND analysis of the parties’ conduct tracked these broad principles:

The court is of the opinion that information transfer in today’s society depends on wireless communication technologies and information interconnectivity is achieved by practicing wireless communication technology standard in the international society. As patented technologies are included in standards, standard essential patents (SEP) come into being. SEPs have such characteristics as compulsiveness, irreplaceability and inevitability of exploitation, and in order to guarantee the promotion and application of technology standards and sound operations of the SEP system, the patentees and the exploiters of SEPs shall have the obligation to have SEP licensing negotiations according to FRAND (fair, reasonable and non-discriminatory) principles.

Id. at 176. The Court viewed FRAND compliance as a distinct, threshold issue to be addressed separately from the question of whether Samsung’s infringement should be enjoined as a matter of pure patent law. *Id.* at 177. To resolve that dispute, the Court looked to both “the fair, reasonable, and non-discriminatory licensing mechanism of SEPs as well as the international conventions of SEP cross-licensing negotiations.” *Id.* at 179. The Court articulated principles of FRAND policy to evaluate Samsung’s and Huawei’s conduct, including its assessment of neutral arbitration or court adjudication as “an effective way to resolve the dispute over SEP cross-licensing negotiations,” and the Court’s use of court-directed mediation to resolve FRAND disputes. *Id.* at 185, 187, 189. In light of these FRAND principles, embodying the Chinese Court’s assessment of the public interest, the Shenzhen Court found an injunction appropriate only because Huawei had complied with FRAND principles and Samsung had not. *Id.* at 209. Accordingly, Samsung’s counterclaim—which effectively seeks to vacate that injunction—is barred by the act of state doctrine.

III. HUAWEI DOES NOT INFRINGE THE ASSERTED CLAIM OF THE ’350 PATENT

Huawei is entitled to summary judgment of noninfringement, both literal and under the doctrine of equivalents (DOE), on claim 1 of Samsung’s ’350 patent because: 1) the claim requires that each phone (user equipment or UE) in a network cell determine *the same* numeric value (a ratio), but the undisputed evidence shows that the values are in fact different for different phones; 2) the claim requires that *the UE* determine this ratio, but Samsung has not shown any Huawei UE

1 actually determines this ratio; and 3) Samsung failed to articulate anything more than a boilerplate
2 DOE theory until the re-direct of its expert during his deposition on the last day of expert discovery.

3 According to Samsung, “the ’350 patent is directed to a technique for a UE determining
4 power setting ratios based on signaling received from the eNodeB” Ex. 22, IPR2017-01981
5 Min Decl. ¶ 55 (emphasis added). Claim 1 of the ’350 patent requires “determining a cell-specific
6 ratio (ρ_B/ρ_A) . . . based on [a received] cell-specific parameter and a number of cell-specific antenna
7 ports configured in the base station.” Ex. 23, ’350 patent at 14:31-36 (emphasis added). Something
8 is “cell-specific” only when it is the same *for every UE in a cell*. See Ex. 24, Min Rebuttal Rpt.
9 ¶ 545 (“cell-specific simply means something that is *common to all the terminals in a cell*”)
10 (emphasis added); Ex. 25, J. Zhang Dep. 23:24-24:7 (“cell-specific signaling . . . [is] a common
11 signal for the terminals in the cellular system in one cell. That’s why it’s called cell-specific.”); Ex.
12 26, Prucnal Dep. 73:23-74:8 (“a cell-specific parameter [means that] *the same thing is – is broadcast*
13 *to all the mobile devices in the cell*”); Ex. 27, Prucnal Rpt. ¶ 208 (cell-specific parameters “*apply to*
14 *all mobile devices in the specific cell* being serviced by the base station”) (emphasis added); *see also*
15 Ex. 28, Min Dep. 62:22-63:5, 64:15-24, 65:18-23, 68:4-14.⁹

16 Thus, to satisfy claim 1 of the ’350 patent, *all* UEs in a cell—all accused and non-accused
17 Huawei phones, all Samsung phones, all Apple phones, all phones using Qualcomm baseband
18 processors, etc. in a cell—must determine the same “cell-specific ratio.” The accused Huawei
19 phones¹⁰ cannot infringe claim 1 because the numeric values they use, which Samsung asserts
20 correspond to the claimed “ratio,” are entirely different depending on the manufacturer of the
21 baseband processor in the UE. Specifically, Samsung alleges that values called “quantization
22 coefficients” used by Huawei and Samsung LTE phones “correspond” to the claimed “cell-specific
23 ratio” of claim 1. See Ex. 27 Prucnal Rpt. ¶ 586 (contending that the quantization coefficients are
24 “representative of the ratio that correspond[s] to ρ_B/ρ_A ”). But even under Samsung’s theory, these
25 quantization coefficients are *not* the same for all UEs. For example, Samsung’s expert admits that
26

27 ⁹ Dr. Min is Samsung’s expert for the ’350 patent in IPR proceedings. Jianzhong Zhang is an
28 inventor of the ’350 patent, who was deposed in this case. Dr. Prucnal is Samsung’s expert for the
’350 patent in this case.

¹⁰ See ECF No. 319 (listing accused Huawei phones).

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Thus, even if the quantization coefficients in the above table were the claimed “ratio” in claim 1, Samsung’s own allegations demonstrate that these numbers are not “cell-specific” and Huawei’s accused phones cannot infringe claim 1.

Huawei’s accused phones likewise cannot infringe claim 1 because there is no evidence that *the phones* actually determine a “cell-specific ratio ρ_B/ρ_A ” as required by the claim and the LTE standard. Samsung argues that there is a mathematical correspondence between the claimed “ratio” and the quantization coefficients actually used by the phones. The only evidence that purportedly shows this correspondence for all of the processors is a handwritten table by Dr. Prucnal that Samsung’s counsel introduced as an exhibit on re-direct examination during his deposition. *See* Ex. 26, Prucnal Dep. 89:7-90:9; Ex. 29, Prucnal Dep. Exhibit 834. But Dr. Prucnal’s testimony about that exhibit proves that the accused devices do not determine the claimed ratio. Instead, *Dr. Prucnal* determined the ratio by calculating it himself based on values allegedly present in the phones. *See* Ex. 26, Prucnal Dep. 90:3-9 (“So these are tables that *I calculated* that show for different cell-specific parameters PB the quantization coefficients that were used by Samsung, Qualcomm, and HiSilicon. And then the amplitude ratios that those corresponded to. And finally, the cell-specific power ratios that those corresponded to.”) (emphasis added). And neither Samsung nor Dr. Prucnal has provided any evidence that the accused Huawei devices perform the additional calculations that Dr. Prucnal says can be used to convert the quantization coefficients into the claimed ratio.

1 Finally, Samsung's infringement contentions in this case include only a boilerplate
 2 reservation to assert infringement under DOE at a later date. *See* Ex. 30, Samsung's Second Suppl.
 3 Infr. Contentions 8-9 (May 3, 2017). Such a boilerplate reservation is manifestly inadequate to meet
 4 Samsung's disclosure obligations under this Court's precedent. *See PersonalWeb Techs. LLC v. Int'l*
 5 *Bus. Machines Corp.*, 2017 WL 2180980, at *15 (N.D. Cal. May 18, 2017) (summary judgment of
 6 no infringement under DOE because "[b]lanket reservations of rights [in infringement contentions]
 7 are not sufficient"); *OptimumPath, LLC v. Belkin Int'l, Inc.*, 2011 WL 1399257, at *8 (N.D. Cal.
 8 Apr. 12, 2011), *aff'd*, 466 Fed.Appx. 904 (Fed. Cir. 2012) (summary judgment of no infringement
 9 under DOE where plaintiff "relies on a blanket statement" which "falls short of the requirements of
 10 Patent Local Rule 3-1(e)"); *Rambus Inc. v. Hynix Semiconductor Inc.*, 2008 WL 5411564, at *3
 11 (N.D. Cal. Dec. 29, 2008) (summary judgement of no infringement under DOE because "[t]he Patent
 12 Local Rules require a limitation-by-limitation analysis, not a boilerplate reservation"); *MEMC Elec.*
 13 *Materials v. Mitsubishi Materials Silicon Corp.*, 2004 WL 5363616, at *5 (N.D. Cal. Mar. 2, 2004)
 14 (precluding expert testimony under DOE because "[t]his blanket statement does not identify where
 15 each element of each asserted claim is found . . . and does not point out each element . . . that
 16 [plaintiff] claims is present under the doctrine of equivalents").

17 Samsung never sought to amend its contentions to include a DOE theory. Instead, it
 18 disclosed a meager DOE theory for claim 1 of the '350 patent for the first time after the close of fact
 19 discovery, in two paragraphs of an expert report. *See* Ex. 27, Prucnal Rpt. ¶¶ 589-90. Samsung then
 20 sought to buttress its insufficient DOE theory by having its expert produce a handwritten table and
 21 eliciting testimony about the table *for the first time during re-direct examination at the expert's*
 22 *deposition*. *See* Ex. 26, Prucnal Dep. 89:7-90:9 ("Q. Did you bring any other documents with you
 23 today? A. Yes . . . I did some analysis..."); Ex. 29, Prucnal Dep. Exhibit 834. This eleventh-hour
 24 attempt to elicit new DOE opinions from its expert comes far too late under this Court's precedent,
 25 and is highly prejudicial to Huawei, which has not been afforded an opportunity to conduct fact or
 26 expert discovery regarding these theories. And in any event, Samsung's DOE argument fails as a
 27 matter of law, because the DOE analysis offered by Dr. Prucnal is directed to showing the purported
 28 equivalence of the entire claim, rather than the "determining" element. *Abbott Labs. v. Sandoz, Inc.*,

566 F.3d 1282, 1296 (Fed. Cir. 2009) ("Infringement analysis under the doctrine of equivalents proceeds element-by-element; a generalized showing of equivalency between the claim as a whole and the allegedly infringing product or process is not sufficient to show infringement"). The "determining" claim element requires determining a number that is the same across all UEs in a cell; performing an operation that yields a different number is not performing substantially the same function, in substantially the same way, to achieve substantially the same result.

IV. HUAWEI DOES NOT INFRINGE THE ASSERTED CLAIMS OF THE '130 PATENT

The plain claim language of asserted claims 13 and 16 of the '130 patent¹¹ shows that both the "mapping the data information" and "mapping the acknowledgement information" elements must be performed after the "mapping a reference signal" limitation. There is no dispute that Huawei's products do not perform the accused functionality in the order claimed. *See* Declaration of Dr. Mark Mahon in Support of Huawei's Motion for Summary Judgment ("Mahon Decl.") ¶¶ 21, 22, 31. Consequently, the Court should enter summary judgment of non-infringement.

Claims 13 and 16 claim a method for mapping certain types of data and control information—specifically, mapping a "reference signal," "data information," and "acknowledgement information"—into assigned "symbols." *See* Ex. 33, '130 Patent at Claims 13, 16; ECF No. 149 at 3:14-22. Claim 13, the parent of claim 16, recites the following steps, in the following order:

- "mapping a reference signal to a middle symbol of the slot";
- "mapping the data information to ***remaining symbols in the slot that are not used to map the reference signal***"; and
- "mapping the acknowledgement information to first symbols among ***the remaining symbols in the slot***, the first symbols not being used to map reference signals and the first symbols being directly adjacent to the middle symbol."

Ex. 33, '130 Patent at Claim 13 (emphasis added).

This claim recites a specific way of assembling these symbols, where the second and third steps must be performed after the first because the claim terms "***remaining symbols in the slot that are not used to map the reference signal***" and "***the remaining symbols in the slot***" in the second and

¹¹ The technology in the '130 patent is explained in Huawei's claim construction brief and tutorial. *See* Huawei's Responsive Claim Construction Br. 3-4 (June 9, 2017); Ex. 31, Tutorial Hr'g 69:18-75:24 (Aug. 7, 2017), ECF No. 163; ECF No. 149; Ex. 32, Huawei's Tutorial Presentation (Aug. 7, 2017) at pp. 113-16.

third steps, respectively, demonstrate an ordering of these “mapping” steps. *mFormation Techs. v. Research in Motion*, 764 F.3d 1392, 1398 (Fed. Cir. 2014) (“a claim ‘requires an ordering of steps when the claim language, as a matter of logic or grammar, requires that the steps be performed in the order written’”). The claims require mapping “data information” and “acknowledgement information” to the symbols that **remain after** mapping “a reference signal.” The ordinary meaning of “remaining” is “to be left after the removal, loss, destruction, etc., of all else.” Ex. 34, <http://www.dictionary.com/browse/remaining?s=t>. Logically, until the reference signal is mapped, the “remaining symbols in the slot that are not used to map the reference signal” do not exist, which is also true of “the remaining symbols in the slot,” whose “the” refers back to the “remaining symbols.” As such, no symbols remain after mapping the reference signal until the reference signal is mapped. To hold otherwise would render these claim terms meaningless. In addition, the “mapping the acknowledgement information” step also recites “the first symbols not being used to map reference signals.” Simple logic dictates that one cannot have “the first symbols not being used to map reference signals” before mapping the reference signals.

As the patentee, Samsung bears the burden of proof to show infringement. *Medtronic, Inc. v. Mirowski Family Ventures, LLC*, 134 S.Ct. 843, 846 (2014). Conversely, Huawei’s summary judgment motion need only identify Samsung’s lack of support for infringement, which demonstrates that Samsung lacks evidence of an essential element. *See e.g., Nissan Fire & Marine Ins. Co. v. Fritz Companies*, 210 F.3d 1099, 1102 (9th Cir. 2000). Samsung’s expert failed to identify any evidence that Huawei’s products perform the accused functionality in the order claimed. *See* Ex. 36, Bambos Inf. Rep. ¶¶ 550-632.

In addition to Samsung’s failure to meet its burden to show infringement, the undisputed evidence shows that Huawei products do not perform the claimed “mapping” in the order required.¹² Huawei products use chips from HiSilicon and Qualcomm, neither of which perform the asserted functions in the order claimed. Both chips add the alleged reference signal (the demodulation reference signal or DMRS), after first assembling the data and acknowledgement information.

¹² Huawei does not perform the claimed functions either. But for the purposes of this motion, Huawei assumes that the accused functionality does perform the claimed functions.

Date	Time	Location	Weather	Wind	Temp	Humidity	Pressure	Remarks
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1902	11:00	St. Louis	Clear	S 10	65	75	30.0	Clear
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1904	13:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1905	14:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1906	15:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1907	16:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1908	17:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1909	18:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1910	19:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1911	20:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1912	21:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1913	22:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1914	23:00	St. Louis	Clear	S 10	65	75	30.0	Clear
1915	24:00	St. Louis	Clear	S 10	65	75	30.0	Clear
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Finally, the Court should grant summary judgment despite Samsung's expert's perfunctory doctrine of equivalents opinion. "Where the evidence is such that no reasonable jury could determine two elements to be equivalent, district courts are obliged to grant partial or complete summary judgment." *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 US 17, 39 n.8

[REDACTED]

1 (1997). Samsung’s expert makes several legal errors.

2 His opinion first analyzes the function/way/result of the entire claim (Ex. 36, Bambos Infr.
3 Rpt. ¶¶ 792-93), rather than the limitation asserted to be met by an equivalent, which is legal error.
4 *Freedman Seating Co. v. American Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005) (“the all
5 limitations rule requires that equivalence be assessed on a limitation-by-limitation basis, as opposed
6 to from the perspective of the invention as a whole”). Equivalents is determined based on the claim
7 element purported to have an equivalent in the accused products. *Id.*

8 The claim elements Samsung asserts to be met by an equivalent are “remaining symbols in
9 the slot that are not used to map the reference signal” and “the remaining symbols in the slot.”
10 These limitations logically result in the ordering of the steps, as discussed above, and thus would
11 require an equivalent under the doctrine of equivalents. Instead of analyzing these limitations,
12 Samsung’s expert looks at the alleged function/way/result of the overall claim. Ex. 36, Bambos Infr.
13 Rpt. ¶¶ 792, 793. Samsung’s expert thus fails to analyze the limitation purported to be met by an
14 equivalents.

15 By not analyzing the correct limitation, Samsung’s expert also provides a legally faulty
16 function/way/result analysis. The result of the limitations proposed to be met by equivalents is the
17 ordering of the first three elements of claim 13, as explained above. Samsung’s expert gets a
18 different result (“transmitting a signal with minimal distortion of the underlying information,” Ex.
19 36, Bambos Infr. Rpt. ¶ 792), which has nothing to do with the missing claim element because he
20 looks at the overall claim. Here, the result of these missing limitations is very different—in one
21 case, the mapping is performed in the claimed order and in Samsung’s equivalents analysis it can be
22 performed in any order. Samsung, however, has failed to make any showing that the alleged
23 equivalents achieves substantially the same result.

24 Samsung’s expert’s doctrine of equivalents analysis would also vitiate these claim terms.
25 “[A]n element of an accused product or process is not, as a matter of law, equivalent to a limitation
26 of the claimed invention if such a finding would entirely vitiate the limitation.” *Freedman Seating*,
27 420 F.3d at 1358. Samsung’s expert would eliminate the requirement to map to “remaining
28 symbols.” As in *Freedman Seating*, this portion of “the subject matter claimed by the [‘130] patent

involves relatively simple and well-known technologies.” *Id.* at 1362; *see* Ex. 38, Papasakellariou Dep. 79:1-10, 83:5-15 (Nov. 3, 2017). Nevertheless, Samsung chose to limit its claim to mapping in a specific order. “Members of the public were therefore justified in relying on this specific language in assessing the bounds of the claim.” *Freedman Seating*, 420 F.3d at 1362.

Consequently, the Court should grant summary judgment that Huawei does not infringe the asserted claims of the ‘130 patent.

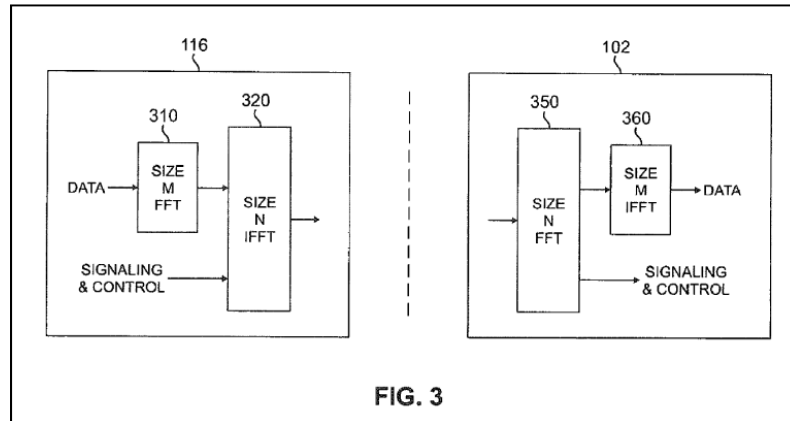
V. HUAWEI DOES NOT INFRINGE THE ASSERTED CLAIMS OF THE ’105 PATENT

Asserted claims 28, 29, and 32 require “*modulating data information to generate non-FT precoded modulation data symbols*” and then “*Fourier Transform (FT) pre-coding the non-FT precoded modulation data symbols to generate FT pre-coded symbols.*” In his infringement analysis, Samsung’s expert, Dr. Prucnal, identifies as “FT precoded symbols” symbols in the physical uplink shared channel (PUSCH) that contain both control information and data information. Ex. 27, Prucnal Rpt. ¶¶ 362-77, 392-412. However, “*FT pre-coded symbols*” cannot contain control information. Huawei products therefore do not infringe the asserted claims.

The claim language and the ’105 patent specification make clear that the term “*FT pre-coded symbols*” means “modulated data symbols that do not contain signaling or control information and have been put through a Fourier transform operation.” *E.g.*, 105 Patent, Fig. 3; 3:56-60; 6:43-7:11. But in his expert report, Dr. Prucnal opined that this term could cover symbols that contain control data as well as data information. Ex. 26, Prucnal Dep. 46:25-47:4, 64:22-65:5, 68:24-69:18 (testifying that control quality indicators (CQI) is FT pre-coded control information on the PUSCH). This interpretation is directly contrary to the intrinsic evidence. The asserted claims differentiate between “*data information*” and “*control information*” and also “*data symbols*” and “*control symbols.*” 105 Patent, 13:45-51. This indicates that the asserted claims treat “data” and “control” as different things. *Comaper Corp. v. Antec, Inc.*, 596 F.3d 1343, 1348 (Fed. Cir. 2010) (“There is an inference, however, that two different terms used in a patent have different meanings.” (citing *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1579 (Fed. Cir. 1996))).

Further, the ’105 patent specification differentiates between data and control information. Figure 3 – which Samsung’s expert calls “an exemplary embodiment of the ’105 Patent” (Ex. 27,

Prucnal Rpt. ¶ 135), distinguishes between “data” entering element 310 and “signaling & control” entering element 320 (and skipping element 310):



Samsung’s expert also agrees that FT pre-coded symbols do not include control information. He repeatedly describes the specification as processing control information and data information separately. *E.g.*, Ex. 27, Prucnal Rpt. ¶ 134 (the “exemplary embodiment of the ’105 Patent performs Fourier transform (FFT) pre-coding on only the data symbols”). Samsung’s expert also provides a reason for *not* FT pre-coding control information. *Id.* ¶ 136 (“FFT pre-coding the data symbols and not the control symbols is an efficient way of generating time-domain signals that have a lower PAPR.”).

For these reasons, “*FT pre-coded symbols*” created from “*non-FT pre-coded modulation data symbols*” do not include control or signaling information. Huawei’s products do not infringe the asserted claims as a matter of law under this construction. Samsung’s expert asserts that the “*FT pre-coded symbols*” are symbols that comprise the physical uplink shared channel (PUSCH). Ex. 27, Prucnal at ¶¶ 395-97. However, Samsung’s expert also testified that the PUSCH contains control information. Ex. 26, Prucnal Dep. 46:25-47:4, 64:22-65:5, 68:24-69:18 (testifying that control quality indicators (CQI) are FT pre-coded control information on the PUSCH); 68:24-18 (testifying that demodulation reference signals (DMRS) and sounding reference signals (SRS) are control signals on the PUSCH); *see also* Mahon Decl. ¶ 4-6. Further, another of Samsung’s experts opined that *every* symbol in the PUSCH except for the DMRS contains CQI, which is control information. Ex. 36, Bambos Infr. Rpt. ¶ 564 (“As described in Section 5.3.4 of TS 36.211 below, the multiplexed data and CQI information is mapped to every symbol not containing the DM RS.”).

1 The PUSCH also contains other control information, such as hybrid automatic repeat requests
 2 (HARQ), pre-coding matrix indicators (PMI), rank indications (RI), and scheduling requests (SR).
 3 See Mahon Decl. ¶¶ 9-13.

4 Because “*FT pre-coded symbols*” cannot include control information and because Samsung’s
 5 expert asserts that the “*FT pre-coded symbols*” are symbols comprising the PUSCH, which includes
 6 control information, the Huawei products do not infringe the asserted claims. Huawei respectfully
 7 ask the Court to grant summary judgment of non-infringement of the ’105 patent.

8 **VI. HUAWEI DOES NOT INFRINGE THE ASSERTED CLAIMS OF THE ’825 PATENT**

9 The ’825 patent is directed to reducing the possibility of collisions between different UEs in
 10 the event that the UEs initiate communications with a base station using the same shared channel
 11 during the same time period. As set out in claims 1 and 4, a UE randomly picks a temporary ID from
 12 a pool of IDs to initiate communications with the base station and waits for a period of time T before
 13 monitoring the downlink during another period of time for a responsive message. If a response is
 14 received during the monitoring window of time (i.e., valid period) P, the UE concludes that it has
 15 permission to transmit data, and does so using an ID included in the downlink message. If two UEs
 16 try to initiate communications using the same temporary ID in the same time period, the possibility
 17 of collisions is lessened because the UEs will wait different periods of time before beginning to
 18 monitor the downlink channel. See Ex. 39 (’825 patent) at 3:32-34, 3:52-58, 6:12-7:7; see also ECF
 19 No. 149 at 9-11; Ex. 32, Huawei’s Tutorial Presentation at pp. 85-98; Tutorial Hr’g 98:5-100:21.

20 Asserted claims 1 and 4 both contain the claim limitation “system information indicating a
 21 group of identifications(ID)s.” See Ex. 39, ’825 Patent 11:40-62; 12:1-28. The Huawei UEs do not
 22 meet this limitation, and Huawei is therefore entitled to summary judgment of no infringement as a
 23 matter of law. Samsung initially contended that the claim term “*system information indicating a*
 24 *group of identification(ID)s*” needed no construction, see ECF No. 124-3 at 58, but now attempts to
 25 backtrack and apply an impermissibly broad interpretation of the term that is at odds with the ’825
 26 patent specification, in order to claim infringement by Huawei’s accused products. The specification
 27 of the ’825 patent is clear: “system information indicating a group of identification(ID)s” means
 28 “*system information including a group of identification(ID)s.*”

1 The '825 patent repeatedly and consistently describes the system information at issue as
 2 **including** the group of IDs. *See, e.g.*, Ex. 39, '825 Patent 5:32-33 (Fig. 4: "The system information
 3 includes the temporary ID pool of the cell A. The UE 405 stores the temporary ID pool."); 8:51-52
 4 (Fig. 9: "The system information includes a temporary ID pool of the cell A, a delay duration T, and
 5 a valid period P."); 2:57-65, 7:11-20, 9:56-65; *GPNE Corp. v. Apple Inc.*, 830 F.3d 1365, 1370-71
 6 (Fed. Cir. 2016); *see TAP Pharm. Prods. v. Owl Pharm.*, 419 F.3d 1346, 1354 (Fed. Cir. 2005).¹⁴
 7 The patent specification does not disclose that "indicate" means "point out or index," as Samsung's
 8 expert, Dr. Valenti, now suggests. Indeed, Dr. Valenti has admitted, with reference to the delay
 9 duration T and valid period P, that being "**included** in system information" means that the "**value** is
 10 what's transmitted"—not simply an index or other way to point to a group of IDs. Ex. 40, Valenti
 11 Dep. (June 20, 2018) 95:22-96:14 (emphasis added).

12 Huawei's proposed construction makes sense in the context of the '825 patent: "the Node B
 13 910 manages temporary ID pools on a cell-by-cell basis," *id.* at 8:44-45, allowing the UE to "detect
 14 temporary IDs available in the current cell." *Id.* at 7:11-20, 9:56-65. Conversely, Dr. Valenti
 15 identifies no disclosure in the '825 patent of "indicating" the pool of IDs via a pointer or index. *See*
 16 Ex. 41, Valenti Rpt. ¶¶163-66. And, none of the specific portions of the '825 patent identified by
 17 Samsung as relevant to this term describe such a feature. *See* Ex. 39, '825 Patent 5:31-37; 7:11-14;
 18 8:44-53; 9:59-61. Therefore, construing "indicating" as used in this claim term to mean "including"
 19 instead of "pointing to" or "indexing" is the only construction "consistent with the specification,"
 20 *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005), that "stays true to the claim language
 21 and most naturally aligns with the patent's description of the invention" *Renishaw PLC v.*
 22 *Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998).

23 Under the correct construction of "*system information indicating a group of*
 24 *identification(ID)s*," there is no dispute that the accused Huawei products do not infringe claims 1
 25 and 4 of the '825 patent. Samsung's expert, Dr. Valenti explained in his deposition that the system

26 ¹⁴ The '825 patent further discusses that the UE "acquires the temporary ID pool . . . from system
 27 information" in the same way that a UE "acquires information from a Node B" such that "the UE
 28 detects temporary IDs available in the current cell." Ex. 39, '825 Patent 7:11-20, 9:56-65. This is
 consistent with the '825 patent's repeated disclosure that the UE "acquires" system information
 including the temporary ID pool. *Id.* at 5:31-33, 8:50-53.

information includes information (1) identifying the *size* of two preamble groups (Group A and Group B), and (2) other information that the UE uses as part of an algorithm to determine which preamble group to use. Ex. 40, Valenti Dep. 116:1-124:9; *see also* Ex. 41, Valenti Rpt. ¶¶ 370-75 (citing, *e.g.*, TS 36.331 V8.7.0, § 6.3.2 (identifying the information included in LTE system information); TS 36.321 V8.7.0, § 5.1.1 (describing the algorithm used to pick the preamble group)). At best, Dr. Valenti testifies that the base station “provides information about what is Group A, what is Group B,” which he alleges is sufficient to satisfy “system information indicating the groups.” Ex. 40, Valenti Dep. 119:6-9. Identifying the *size* of a group of IDs already present on the UE, however, is merely “pointing to” or “indexing” the group of IDs, if that. Samsung and Dr. Valenti have offered no evidence or argument that the Huawei accused products receive system information **including** the group of IDs. The system information only provides the UE with information used to calculate a group of IDs, and does not include the actual group of IDs itself. *See* Ex. Mahon Decl. Ex. A (TS 36.321 V8.7.0, §5) (“The preambles . . . contained in Random Access Preambles group A and . . . B are **calculated** from the parameters [included in the system information].”); Ex. 41, Valenti Rpt. ¶¶ 371-74, 382, 396; *see also* Ex. 42, La Porta Rebuttal Rpt. ¶¶ 121, 132.

Nor can reliance on the doctrine of equivalents save Samsung’s infringement case. Samsung has never articulated anything beyond a boilerplate doctrine of equivalents argument. Ex. 30, Samsung 2nd Suppl. Infringement Contentions at 7-9; Ex. 43, Exhibit I to Samsung Infringement Contentions at 6. Such boilerplate is insufficient to prove infringement under the doctrine of equivalents. *See PersonalWeb Techs.*, 2017 WL 2180980, at *15; *OptimumPath, LLC*, 2011 WL 1399257, at *8; *Rambus Inc.*, 2008 WL 5411564, at *3; *MEMC Elec. Materials*, 2004 WL 5363616, at *5 (N.D. Cal. Mar. 2, 2004). Samsung’s infringement expert on the ‘825 patent, Dr. Valenti, likewise never articulates any reasoning or analysis beyond repeating the same type of boilerplate language. *See* Ex. 41, Valenti Rpt. ¶¶ 399, 856-857. Thus, Huawei is entitled to summary judgment as a matter of law that it does not infringe the ‘825 patent.

VII. CONCLUSION

Huawei respectfully requests this Court grant Huawei summary judgment on these issues for the reasons provided above.

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